

REMARKS

The Office Action dated January 29, 2002, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

Claims 28-70 are pending and Claims 28-70 are rejected. Claim 59 has been cancelled.

The drawings have been objected to under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the claims. Specifically, with respect to Claim 59, the Examiner noted that the land vehicle, ship, aircraft, space vehicle and ground recited in Claim 59 are not shown. As Claim 59 has been canceled, it is submitted that the objection is moot and it is requested that the objection be withdrawn.

As for the objection based upon Claims 60-62, the drawings were objected to because they did not appear to show the "plurality of pair of plugs" feature of the claims. The Examiner requested that the figures be amended to show a plurality of pair of plugs. A proposed amended Figure 2 that shows this feature of the claims has been attached to this Amendment. Therefore, it is requested that this objection be removed in light of the attached proposed corrected Figure.

The drawings were also objected to under 37 C.F.R. § 1.83 because they allegedly fail to show a spring or return means as disclosed in the substitute specification on page 15, line 8. It is submitted that this objection is not well taken.

Attached to this response is a marked on copy of Figure 5 in which it is shown that the spring or return means is already clearly shown in the Figure. Therefore, as this element of the invention is illustrated in the Figures, it is requested that this objection be withdrawn as well. If the Examiner prefers that the specification be amended to describe the return or spring means, counsel would be pleased to do so.

The specification is objected to under 37 C.F.R. § 1.75(d) because the connection between the cartridge and the receptacle made by a plurality of pairs of plugs has not been described, as recited in claim 60. However, it is noted that page 9, lines 19-21, of the original specification and that paragraph 76 of the substitute specification disclose that the connection between the recording cartridge 40 and suspended receptacle 30 is made by as many couples of "plug 10"/"stud 12 or 16 or 18" as there are required contacts. Therefore, it is submitted that this feature of the invention is properly disclosed in the specification and it is requested that the objection be withdrawn.

The Examiner also objected to the specification because both reference numerals 70 and 200 have been used to designate a box. It is submitted that the hood of the box is designated with reference numeral 70 and the box with reference numeral 200. Paragraph 58 has been amended to better reflect the different reference numerals. Therefore, it is requested that the objection be withdrawn in light of the amended specification.

The Examiner also stated that the reference character "M" has been used to designate several different elements of the invention. Applicant is in the process of

preparing a substitute specification in which this issue is addressed. It is requested that this objection be held in abeyance until Applicant provides the Examiner with a substitute specification, which will be filed shortly in a Supplemental Amendment.

The Examiner has also objected to the specification because page 14, lines 10-22 describing the temporary locking of the shift M is unclear. In response to the Examiner's request for information, it is submitted that the temporary locking shift is a set of components that serves to automatically shift the receptacle 30 away from the shock absorbers as described at page 15. The locking shift comprises the interaction of the prismatic piece or cam 75, with a retractable chock 90, unit 85 including a return means, and axis 87. In light of this explanation, it is requested that the objection be withdrawn.

Claims 60-62 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner has taken the position that the Claim 60 recitation of a "connection between the cartridge and the receptacle is made by a plurality of pairs of plugs" is not clear. Applicant submits that this rejection is no longer well taken in light of the attached proposed corrected Figure 2. As the proposed amended Figure 2 clearly shows this aspect of the claimed invention, it is requested that the rejection be withdrawn.

Claims 28-31, 34-38, 43, 51-55, 59-61, 63 and 67 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shimamura et al. (U.S. Patent No. 4,602,351, "Shimamura").

Shimamura discloses a device for reading and writing IC-external storage cards. Shimamura discloses a card plate A having a plurality of contact points D embedded in the card plate A so that the free ends thereof are exposed on one side of the card to be flush with the surface thereof. A first board 10 comprises a main board 12, an additional board 13, a pair of side walls 14 and an end wall 15 to provide a pocket for loading the external storage card like as in a cassette tape recorder. The additional board 13 also has a window 17 formed therein so that the contact points D of the IC card may just face the window 17. A second board or base body 20 comprises a main board 22, a pair of side walls 23, a rear end wall 24 and a front end wall 25. On the second main board 22 there is mounted a block member 31 provided with contact pins 32 of the number and arrangement corresponding to that of the external storage card A so that when the first board 10 is pivotally moved to be in the closed position relative to the second board 20, the contact points D may respectively engage with the contact pins 32 protruding through the window 17. The block member 31 has a coiled spring 33 fixed at one end thereof on the bottom side thereof. Each of the contact pins 32 is provided in the block member 31 to be preferably yieldingly moveable in an axial direction by providing a coiled spring 28.

With respect to independent claims 28, 60 and 63, it is submitted that Shimamura fails to disclose the claimed features of the invention. Claim 28 recites that the cartridge is engageable in the receptacle. The Examiner has taken the position that the block member 31 is comparable to the receptacle and the first board 10 is comparable to the cartridge. However, the first board 10 in Shimamura is not engageable in the block

member 31. See Fig. 4A of Shimamura. Rather, the first board 10 of Shimamura is disposed on top of the block member 31. Therefore, Shimamura fails to disclose that a cartridge is engageable in a receptacle as recited in claim 28.

Furthermore, claim 28 recites a cartridge having a stud hermetically mounted on the cartridge. In contrast, the studs or contacts D in Shimamura are mounted on a hard disk, not on the first board 10 which the Examiner alleges are comparable to the cartridge of the present invention. As such, the first board 10 does not have contacts D hermetically mounted on the first board 10. Therefore, it is submitted that Shimamura also fails to disclose a cartridge having a stud hermetically mounted on the cartridge. Furthermore, there is no clear teaching in Shimamura that the contacts D are hermetically mounted on even the IC card A.

Claim 60 recites a stud hermetically mounted on the cartridge. In contrast, Shimamura discloses that contacts D are mounted in the wall of the IC card A. There is no clear teaching in Shimamura that the contacts D are hermetically mounted on the first board 10, which the Examiner considers comparable to the cartridge of the present invention. Claim 60 also recites a plurality of pairs of plugs. In contrast, Shimamura merely discloses a collection of contact pins 32 which do not appear to be arranged in pairs. It is submitted that a pair is could be defined as two spatially related elements. Furthermore, claim 60 recites that the studs protrude through the wall of the cartridge and present a slightly protuberant part. In contrast, Shimamura discloses that the contact points D are embedded in the card plate A so that the free ends thereof are exposed on one side of the card to be flush with the surface thereof. As such, it does

not appear that Shimamura teaches a protuberance for the contact points D as they are flush with the surface of the card plate A. Therefore, it is submitted that Shimamura fails to disclose the features of the invention as recited in claim 60.

Claim 63, similarly to claims 28 and 60, recites that a stud is hermetically mounted on the cartridge. As discussed above with respect to claims 28 and 60, Shimamura fails to disclose a stud hermetically mounted on a cartridge. Rather, contact points D are mounted on an IC card that is disposed within a first board 10. Furthermore, there is no clear teaching in Shimamura of the hermetic mounting of the contacts D. Therefore, it is submitted that Shimamura fails to disclose the features of the invention as recited in claim 63.

Claims 32 and 39-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura. The Examiner has taken the position that Shimamura teaches the claimed features of the invention with the exception of a plurality of plugs and cartridges. The Examiner has taken the position that it would have been obvious to provide a plurality of plugs and cartridges as a duplication of essential parts.

With respect to the rejection of claims 32 and 39-40 it is submitted that as Shimamura fails to teach or suggest the features of the invention as recited in claim 28, that the reference would also fail to teach or suggest the features of dependent claims 32 and 39-40.

Claims 33 and 62 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura in view of Guruswamy et al. (U.S. Patent No. 5,004,583, "Guruswamy"). Shimamura was cited for disclosing many of the claimed elements of

the invention with the exception of the contacts D having different shapes. Guruswamy was cited for curing this deficiency.

Guruswamy discloses a universal sensor cartridge for use with a universal analyzer for sensing components in a multicomponent fluid. Fig. 8 of Guruswamy is a graphical representation of the sensor construction and flux density variations caused by edge effects. The figure also represents the contribution of the edge effects to various electrode structures. Electrodes 110, 112 and 114 have concave, convex and flat membranes, respectively, each demonstrating a uniform flux density across the entire conductor surface.

With respect to claims 33 and 62, it is submitted that the combination of Shimamura and Guruswamy fails to disclose the claimed features of the invention. Claim 30 depends from claim 28 and claim 62 depends from claim 60. As discussed above with respect to claim 28, Shimamura fails to disclose a cartridge engageable in the receptacle and a cartridge having a stud hermetically mounted on the cartridge. With respect to claim 60, Shimamura also fails to disclose a stud hermetically mounted on the cartridge, a plurality of pairs of plugs, and studs protruding through the wall of the cartridge and presenting a slightly protuberant part. Guruswamy fails to cure these deficiencies in Shimamura. Accordingly, the combination of Shimamura and Guruswamy would fail to teach or suggest all the features of the invention as recited in independent claims 28 and 60 and therefore, dependent claims 33 and 62.

Claims 41, 42, 65 and 66 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura in view of Alcoe et al. (U.S. Patent No. 5,760,465,

"Alcoe"). Shimamura is cited for disclosing many of the claimed elements of the invention with the exception of a protective coating of resin. Alcoe is cited for curing this deficiency.

Alcoe discloses an electronic package with strain relief means. Figure 3 of Alcoe illustrates a electronic package 11 with the addition of a protective coating of encapsulant material 43 surrounding the sides and contact surfaces of a chip 19, projecting lead portions 31, and contact sites 21. Compositions of the encapsulant material are typically a filled epoxy dispensed in viscous form followed by a temperature cure to cause solidification.

With respect to claims 41, 42, 65 and 66, it is submitted that the combination of Shimamura and Alcoe fails to teach or suggest the claimed features of the invention. Claims 41 and 42 depend from claim 28. As discussed above, Shimamura fails to teach or suggest the features of the invention as recited in claim 28. Alcoe fails to cure these deficiencies as Alcoe fails to teach a cartridge having a stud hermetically mounted on the cartridge and a cartridge engageable in a receptacle. Accordingly, the combination of Shimamura and Alcoe fails to teach or suggest the features of the invention as recited in claim 28 and therefore claims 41 and 42. Claims 65 and 66 depend from claim 63. As discussed above, with respect to claim 63, Shimamura fails to teach or suggest a stud hermetically mounted on the cartridge. Alcoe fails to cure this deficiency. Accordingly, the combination of Shimamura and Alcoe fails to teach or suggest the features of the invention as recited in claim 63 and therefore, dependent claims 65 and 66.

Claims 44 and 45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura in view of Rathburn (U.S. Patent No. 6,135,783, "Rathburn").

Shimamura is cited for teaching the features of claimed invention with the exception of the contact coated with gold. Rathburn is cited for curing this deficiency.

Rathburn discloses an electrical connector with multiple modes of compliance. The connector allows contact members to be arranged with a fine pitch without shorting. The contact members are preferably plated with a corrosion resistant metallic material such as nickel, gold, silver or palladium.

Regarding claims 44 and 45, it is submitted that Shimamura and Rathburn in combination fail to teach or suggest the claimed features of the invention. Claims 44 and 45 depend from claim 28. As discussed above, Shimamura fails to disclose the claimed features of the invention. Rathburn also fails to cure the deficiencies in Shimamura as Rathburn fails to teach or suggest that a cartridge is engageable in a receptacle and that the cartridge has a stud hermetically mounted thereto. Accordingly, the combination of Shimamura and Rathburn fails to teach or suggest the features of the invention as recited in claims 44 and 45.

Claims 46-50 and 68-70 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura in view of St. Germain et al. (U.S. Patent No. 5,302,136, "St. Germain"). Shimamura is cited for disclosing many of the claimed features of the invention with the exception of a protuberant piece on the receptacle to engage the groove on the cartridge, and self-cleaning. St. Germain is cited for curing these deficiencies.

St. Germain discloses an apparatus for positively preventing misengagement of multipoint connector elements. St. Germain illustrates a modular programmable logic controller (PLC) system. Three PLC modules are supported by a mounting assembly 12 through a simple pivot pin and pivot slot arrangement. Each PLC module 14, 14', 14" has two associated pivot pins 20 and the mounting assembly 12 provides a number of pivot slots 18, 18', each of which supports at least one of the PLC module pivot pins. Thus, the pivot slots 18, 18' of the mounting assembly 12 support the pivot pins 20 of the PLC modules 14, 14', 14", and hence the PLC modules themselves.

With respect to claims 46-50 and 68-70, it is submitted that the combination of Shimamura and St. Germain fails to disclose the claimed features of the invention. As previously discussed, Shimamura fails to disclose the features of the invention as recited in claims 28 and 63 from which claims 46-50 and 68-70, respectively, depend. St. Germain fails to cure these deficiencies. Specifically, St. Germain fails to disclose a cartridge engageable in a receptacle and that the cartridge has a stud hermetically mounted on the cartridge. Furthermore, we note that St. Germain does not appear to teach self-cleaning as recited in claims 50 and 70. Accordingly, the combination of Shimamura and St. Germain fails to teach or suggest the features of the invention as recited in claims 28 and 63 and therefore, claims 46-50 and 68-70.

Claim 64 is rejected under 35 U.S.C. § 102(a) as being unpatentable over Shimamura in view of Hashizume (U.S. Patent No. 6,035,664, "Hashizume"). Shimamura is cited for disclosing many of the claimed elements of the invention with the exception of glass welding. Hashizume is cited for curing this deficiency.

Hashizume discloses a method of producing an optical module. A method of fixing a lens to a holder includes welding using low-melting glass. In the method, an annular low-melting glass compact obtained by press-molding powder of low-melting glass into an annular shape is used. The low-melting glass compact is placed on a step portion of an inner wall of a holder which supports a lens. The assembly is placed in an oven and subjected to a heat treatment. The low-melting glass compact melts, and the lens 50 is welded to the holder 52. The glass pool 54 is formed as a result of solidification of the low-melting glass.

As previously discussed, Shimamura fails to disclose the features of the invention as recited in claim 63 from which claim 64 depends. Hashizume fails to cure the deficiencies in claim 63 as the reference fails to teach a stud hermetically mounted on the cartridge. Accordingly, the combination of Shimamura and Hashizume fails to teach or suggest the features of the invention as recited in claim 63 and therefore, dependent claim 64.

Claim 56 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura. As noted above, Shimamura fails to disclose each and every feature of the invention as recited in claim 28 and therefore, dependent claim 56. Accordingly, it would not have been obvious to select a spring to provide a force of 1 N (Newton) as recited in claim 56.

Claims 57 and 58 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimamura in view of the Applicant's Admitted Prior Art (AAPA). Shimamura is

cited for disclosing the claimed features of the invention with the exception of a means to automatically cut off a power supply. The AAPA is cited for curing this deficiency.

Page 16, line 16 of the present application discloses a means for automatically cutting the electric power supply by an opening detection contact of the known type.

With respect to claims 57 and 58, it is submitted that the combination of Shimamura and the AAPA fails to teach or suggest the claimed features of the invention. As discussed above, Shimamura fails to disclose the features of the invention as recited in claim 28. The AAPA fails to cure this deficiency as the AAPA fails to teach a cartridge in a receptacle or a stud hermetically mounted on the cartridge. Accordingly, the combination of Shimamura and the AAPA fails to teach or suggest the features of the invention as recited in claims 57 and 58. In light of the above argumentation, it is requested that the prior art rejections be withdrawn.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an

extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. 01-2300, referring to client-matter number 024118-00026.

Respectfully submitted,



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DDD:ksm

Enclosures: Marked Up Figure 5
Proposed Amended Figure 2 with Submission of Proposed Corrected Drawing
Petition for Extension of Time (3 months)
Submission of Formal Drawings (Figure 5)

MARKED UP COPY OF SPECIFICATION

[58] closing hood 70 of box [70] 200 closed: chock in high position permitting movements (M) of receptacle 30; hood open: chock in low position blocking movements (M);